

CLAIMS

What is claimed is:

1. A projection system comprising:
 - a lighting system;
 - a screen;
 - a color filter separating light emitted from the lighting system according to wavelengths of the light;
 - a first reflecting mirror reflecting the light passing through the color filter to change a path of the light;
 - a display device provided in a predetermined position in the first reflecting mirror;
 - a second reflecting mirror reflecting light reflected from the first reflecting mirror toward the display device; and
 - a projection lens unit enlarging and projecting a color image formed by the display device onto the screen.
2. The projection system of claim 1, wherein the lighting system comprises:
 - a lamp light source radiating the light;
 - a reflector reflecting the light emitted from the lamp light source to emit the light in one direction; and
 - an intercepting unit reflecting a portion of the light emitted from the lamp light source toward the reflector so that the light emitted from the reflector has an annular light distribution.
3. The projection system of claim 2, wherein the reflector is an elliptic mirror or a parabolic mirror.
4. The projection system of claim 3, wherein the intercepting unit is convex, the surface thereof curving toward the lamp light source.
5. The projection system of claim 2, wherein the intercepting unit is convex, the surface thereof curving toward the lamp light source.

6. The projection system of claim 2, further comprising uniform light forming units provided in an optical path between the lighting system and the first reflecting mirror, wherein the uniform light forming units convert the light passing through the color filter into uniform light.

7. The projection system of claim 6, further comprising shielding plates provided in the centers of the uniform light forming units, shielding incident light from proceeding.

8. The projection system of claim 6, wherein the uniform light forming units are integrating rods or an array of fly eye lenses.

9. The projection system of claim 6, wherein the lighting system, the color filter, the uniform light forming units, and the first reflecting mirror are arranged in line, and the second reflecting mirror is disposed in an upper space between the uniform light forming units and the first reflecting mirror so that the uniform light forming units and the first reflecting mirror are not inclined to one side of an optical axis.

10. The projection system of claim 2, wherein the first reflecting mirror and the second reflecting mirror are symmetrical with respect to an optical axis.

11. The projection system of claim 1, further comprising collimating lenses provided in an optical path between the color filter and the first reflecting mirror, wherein the collimating lenses convert incident light into parallel light.

12. The projection system of claim 1, further comprising uniform light forming units provided in an optical path between the lighting system and the first reflecting mirror, wherein the uniform light forming units convert the light passing through the color filter into uniform light.

13. The projection system of claim 12, further comprising shielding plates provided in the centers of the uniform light forming units, shielding incident light from proceeding.

14. The projection system of claim 12, wherein the first reflecting mirror is inclined at a predetermined angle with an optical axis of the uniform light formed by the light forming units.

15. The projection system of claim 1, wherein each of the first and second reflecting mirrors is one of an elliptic mirror, a plane mirror, an aspherical mirror, and a spherical mirror.

16. The projection system of claim 1, wherein the first reflecting mirror and second reflecting mirror are symmetrical with respect to an optical axis.

17. A lighting system comprising:
a lamp light source radiating light;
a reflector reflecting the light emitted from the lamp light source to emit the light in one direction; and
an intercepting unit reflecting a portion of the light emitted from the lamp light source toward the reflector so that the light emitted from the reflector has an annular light distribution.

18. The lighting system of claim 17, wherein the reflector is an elliptic mirror or a parabolic mirror.

19. The lighting system of claim 18, wherein the intercepting unit is convex, the surface thereof curving toward the lamp light source.

20. The lighting system of claim 17, wherein the intercepting unit is convex, the surface thereof curving toward the lamp light source.

21. A projection system comprising:
a first reflecting mirror;
a second reflecting mirror; and
a display device provided in the surface of the first reflecting mirror;
wherein the second reflecting mirror receives light reflected from the first reflecting mirror and reflects the received light toward the display device.